

REMARKS/ARGUMENTS

Claims 1, 4-9, 11-14, 16, 17, 19-21, and 25 are pending in this application.

Claim Rejections- 35 U.S.C. § 112, paragraph 1 (Written Description)

The Examiner has objected to paragraph 0024 of the specification under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

In paragraph 8 of this Action, the Examiner has stated that “no statement in this paragraph gives support for the new amendment of ‘selecting an enclosure services module on the first channel’ as found in Claim 1. The term “selecting” as used in Claim 1 was merely meant to indicate that the speed change process has proceeded to the next enclosure service module in the sequence. There is no active choice or “selection” that occurs. Instead, the process occurs in a purely sequential manner. As such, paragraph 0024 of the specification has been amended to clarify the sequential manner in which the speed changes are carried out on each of the enclosures. The term “selected” or “selecting” has been deleted and the phrase “currently undergoing speed change” has been incorporated. As such, the Applicant respectfully requests that the Examiner’s objection under 35 U.S.C. § 112, paragraph 1 (Written Description) be withdrawn.

Claim Rejections- 35 U.S.C. § 112, paragraph 1 (Enablement)

The Examiner has rejected Claims 1-25 under U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

In paragraph 9 of this Action, the Examiner has stated that the applicant has not explained what is meant by “waiting for an enclosure to come up on a second channel.” Applicant respectfully submits that the term “come up” as used in the current context would readily be recognized by one skilled in the art as meaning the enclosure has attained the changed

speed and is communicating properly at the new speed. The phrase “come up” is commonly used in the English language to indicate that an entity undergoing a change has reached a desired status (i.e. “...come up to speed). As, the entirety of this paragraph is devoted to the description of the process for altering a disk drive speed, it stands to reason that the use of the phrase “come up” is meant to indicate that the speed for the second channel has reached the desired level. Claim 1 and paragraph 0024 of the specification have been amended to replace the term “come up” with language indicating that the second channel has attained the desired speed. The term “waiting” merely indicates that the bridge controller monitors the second channel to determine when it has attained to the desired speed. This practice is common in the art and no additional support is necessary.

In paragraph 9 of this Action, the Examiner has stated that the Applicant “has not explained the difference between an enclosure service module and an enclosure.” Applicant respectfully directs the Examiner to paragraph 0017, line 2 which states “The enclosure service module and its drives constitute the enclosure.” Therefore, the distinction between an “enclosure services module” and an “enclosure” is readily apparent.

In paragraph 9 of this Action, the Examiner has stated that the Applicant has not explained “how to select an enclosure services module.” As stated above, the term “selecting” as used in Claim 1 was merely meant to indicate that the speed change process has proceeded to the next enclosure service module in the sequence. There is no active choice or “selection” that occurs. Instead, the process occurs in a purely sequential manner. As such, Claim 1 has been amended to clarify the sequential manner in which the speed changes are carried out on each of the enclosures.

In paragraph 9 of this Action, the Examiner has stated that the Applicant has not explained “how to check whether the selected enclosure services module is the first enclosure services module on the first channel.” The Applicant respectfully submits that one skilled in the art would recognized that “checking” which enclosure was currently

undergoing a speed change would necessarily require monitoring of the identity of the current enclosure. Such techniques are readily known in the art. Fibre Channel systems commonly provide mechanisms to monitor the order of the devices in a loop or chain. One such mechanism is a “loop map.” Loop maps are a basic element of Fibre Channel loop initialization. Additionally, as stated above, no active selection occurs in the speed change process. Claim 1 has been amended to clarify the sequential manner in which the speed changes are carried out on each of the enclosures.

In paragraph 9 of this Action, the Examiner has stated that the Applicant has not provided any support for the repetitive steps of Claim 25. The contents of Claim 25 have been incorporated into Claim 1 in order to provide a complete cycle of the process. Claim 25 is canceled. The Applicant respectfully submits that support for the repetitive steps are, in fact, present in the written description. Paragraph 0024 of the specification details the process of Claim 1 where:

- 1) A speed change frame is sent by the controller to the “last” enclosure services module (i.e. the current enclosure services module) connected on channel 1. (§ 0024, lines 2-3)
- 2) The speed of this enclosure is changed. (§ 0024, lines 4-5)
- 3) The bridge controller waits for this enclosure to attain the changed speed. (§ 0024, line 5)
- 4) The bridge controller determines whether the “last” enclosure services module (i.e. the enclosure services module currently undergoing a speed change) is the first enclosure services module connected on channel 1. (§ 0024, lines 9-10).
- 5) If the “last” enclosure services module (i.e. the enclosure services module currently undertaking a speed change) is the first enclosure services module connected on channel 1, the bridge controller changes the speed on channel 1, waits for all of the enclosures to attain the changed speed on that channel, and processing stops. (§ 0024, lines 10-12)

- 6) If the “last” enclosure services module (i.e. the enclosure services module currently undertaking a speed change) is *not* the first enclosure services module connected on channel 1, the “second to the last” enclosure (i.e. the enclosure preceding the current enclosure) is processed. (§ 0024, lines 12-15)
- 7) The processing continues (i.e. return to step 2 above) until the first enclosure connected to channel 1 is processed. (§ 0024, lines 15-16)

As can be seen from the above recitation of the process steps, they do in fact constitute a repetitive sequence from the “last” enclosure connected to channel 1 the “first” enclosure connected to channel 1. Paragraph 0024 as well as Claims 1 and 25 have been amended to clarify the repetitive steps of the speed change process.

In paragraph 10 of this Action, the Examiner has stated that Claim 9 is not enabled because one of ordinary skill in the art would not be able to understand which direction the speed change frames are being sent. Applicant is unclear as to what confusion exists with respect to this language. The first portion of Claim 9 currently recites:

a bridge controller having a first channel and a second channel

a plurality of enclosure services modules, each on the first channel connected in sequence from a first enclosure services module and successively connected to successive enclosure services modules to a last enclosure services module and each on the second channel connected in reverse sequence from the last enclosure services module and successively connected to the successive enclosure services modules to the first enclosure services module.

This language clearly lays out the structure of the bridge controller and enclosure service modules as being arranged sequentially and connected in one direction by the first channel and in the reverse direction by the second channel. This configuration is also readily apparent from the full-system diagram presented in Fig. 1. Claim 9 also recites:

the bridge controller sends a speed change frame to each of the plurality of enclosure service modules on the first channel in sequence from the last enclosure services module to the first enclosure services module and the

second channel is a channel for which the speed is to be changed and the multi ported system includes more than two ports.

This language clearly illustrates that a speed change frame is sequentially sent to each of the enclosure service modules via the first channel starting with the last enclosure service module on the first channel and ending with the first enclosure service module on the first channel. There appears to be no ambiguity as to which channel the speed change frame is transmitted on. Additionally, the full-system diagram presented in Fig. 1 clearly shows the data flow directions between the bridge controller and the enclosure services modules.

In paragraph 10 of this Action, the Examiner has stated that Claim 9 is not enabled because there is no physical relation ship present to connect the bridge controller to the enclosure service modules. Claim 9 recites “a bridge controller having a first channel and a second channel” as well as “a plurality of enclosure services modules, each on the first channel...and each on the second channel.” As each of the components (i.e. the controller and enclosure service modules) is connected on both the first and second channels, a clear physical relationship has been demonstrated.

In paragraph 11 of this Action, the Examiner has stated that Claim 25 is not enabled as there is no explanation of how to repeat the steps or what the end condition of this claim entails. As previously discussed, support for the repetition of the process steps is found in paragraph 0024 of the specification. With respect to the issue of the end condition, the contents of Claim 25 have been incorporated into Claim 1 in order to provide a complete cycle of the process. Claim 25 is canceled.

Pursuant to the above comments and amendments, the Applicant respectfully requests that the Examiner’s rejections of Claims 1-25 under 35 U.S.C. § 112, *paragraph 1 (Enablement)* be withdrawn.

Claim Rejections- 35 U.S.C. § 112, paragraph 2 (Indefiniteness)

The Examiner has rejected Claims 1 and 25 under U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

In paragraph 14 of this action, the Examiner has stated that one of ordinary skill would find the phrasing “selecting an enclosure services module on the first channel, the enclosure services module being the last enclosure services module” to be indefinite. As stated above, the term “selecting” as used in Claim 1 was merely meant to indicate that the speed change process has proceeded to the next enclosure service module in the sequence. There is no active choice or “selection” that occurs. Instead, the process occurs in a purely sequential manner. As such, Claim 1 has been amended to clarify the sequential manner in which the speed changes are carried out on each of the enclosures.

In paragraph 14 of this Action, the Examiner has stated that one of ordinary skill would not be able to definitely know what is meant by “when the enclosure comes up on the second channel, checking whether the selected enclosure services module is the first enclosure services module on the first channel.” As stated above, the term “come up” as used in the current context would readily be recognized by one skilled in the art as meaning having attained the changed speed. Also, as stated above, one skilled in the art would recognize that “checking” which enclosure was currently undergoing a speed change would necessarily require monitoring of the identity of the current enclosure. Such techniques are readily known in the art. Finally, as stated above, no active selection occurs in the speed change process. Claim 1 has been amended to clarify the sequential manner in which the speed changes are carried out on each of the enclosures.

In paragraph 14 of this Action, the Examiner has stated that Claim 25 is highly difficult to comprehend as one of ordinary skill in the art would have difficulty knowing definitely what is meant by “next successive to the selected enclosure services module.” As stated

above, the contents of Claim 25 have been incorporated into Claim 1 in order to provide a complete and clear description of the speed change process. Claim 25 is canceled.

Pursuant to the above comments and amendments, the Applicant respectfully requests that the Examiner's rejections of Claims 1 and 25 under 35 U.S.C. § 112, paragraph 2 (*Indefiniteness*) be withdrawn.

Claim Rejections- 35 U.S.C. § 102

The Examiner has rejected Claims 1, 9, 10-12, 14, 16-17, 19-21, and 25 under 35 U.S.C. § 102(a) as being anticipated by Fibre Channel Framing and Signaling working draft proposal, ("FC-FS Draft Standard," Rev. 1.30 published on July 9, 2001). Applicants respectfully traverse.

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *W.L. Gore & Assocs. v. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). If anticipation is based upon the inherent teaching of a prior art reference, the Examiner must provide a rationale or evidence tending to show inherency. As stated in *In re Robertson*, "to establish inherency the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be recognized by persons of ordinary skill." (emphasis added) *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Additionally, "inherency, however, may not be established by probabilities or possibilities." *Id.* Moreover, "the mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.*

In paragraphs 18, 19 and 23 of the Action, the Examiner has rejected Claims 1, 9 and 16, and has particularly reviewed Claim 1. Applicant respectfully submits that Claim 1, along with Claims 9 and 16, include elements that have not been taught, disclosed or suggested

by FC-FS Draft Standard. For example, FC-FS Draft Standard fails to teach, disclose or suggest “a second channel...connected in reverse sequence as compared to the first channel” as recited in Currently Amended Claims 1 and 9. Claim 16 also contains a similar limitation in that the bridge controller is “connected...to the subservient devices in both a forward order and in a physically separate reverse order through the first channel and second channel.”

In paragraph 17, the Examiner has rejected dependent Claim 17 which recites that the “forward connection and the reverse connection define the first and the second channel.” The Examiner cites language in the FC-FS Draft Standard that discloses “a forward and reverse connection between two nodes.” Applicant recognizes that the examiner may attempt to use such a rationale to reject the above referenced distinctions in Claims 1, 9 and 16 as well. As such, Applicant respectfully submits that the feature cited in the FC-FS Draft Standard is decidedly different than the feature disclosed in Claims 1, 9, 16 and 17.

The FC-FS Draft Standard discloses forward and reverse connections between *individual node pairs* (See pg. 532, Fig. 58). However, Claims 1, 9, 16 and 17 are not referencing such a limited scope of connections. The Application clearly states in claims 1, 9, 16 and 17 that the terms “forward” and “reverse” are used to describe the connections between the bridge controller and the nodal system as a whole. The relevant connections are between the bridge controller and the respective first and last enclosures in the system. As clearly represented in Fig. 1, the bridge controller is connected via channel 1 in a *forward sequence* beginning with the enclosure services module of the first enclosure and in a *reverse sequence* via channel 2 to the enclosure services module of the last enclosure.

It is necessary for the last module operating on the current-speed channel to be the first to change speed so that all the other modules on that channel remain visible. Furthermore, this last module on the current-speed channel needs to be the first module on the new-speed channel so that the controller can establish a connection as the module becomes visible on the new-speed channel.

If the speed change began with the first module on the current-speed channel, the module would be visible on the new-speed channel. However, the controller would lose communication to the remaining modules on the current-speed channel chain. As such, the modules have to change speed from last to first on the current-speed channel, and first to last on the new-speed channel.

This specific arrangement is not disclosed nor suggested in the FC-FS Draft Standard. Accordingly, the rejections of Claims 1, 9, 16 and 17 should be withdrawn, and Claims 1, 9 and 16 are allowable as the FC-FS Draft Standard fails to explicitly or implicitly teach, disclose, or suggest use of a system with a two-channel controller having the first and second channels connected through the enclosure elements in reverse sequence as compared to each other. Claims 10-12, 14, 17, 19-21 and 25 are believed to be allowable based on their dependence upon allowable base claims.

Accordingly, Applicants respectfully request the removal of all the pending rejections under 35 U.S.C. §102 requested and allowance is earnestly solicited.

Claim Rejections – 35 U.S.C. § 103

In paragraph 30-33 of the Action, the Examiner has rejected Claims 4, and 6-8 under 35 U.S.C. § 103(a) as being unpatentable over FC-FS Draft Standard. In paragraph 34 of the Action, the Examiner has rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over FC-FS Draft Standard in view of Wall et al. (“Wall”, U.S. Patent No. 6,507,923). In paragraph 38 of the Action, the Examiner has rejected Claim 13 under 35 U.S.C. § 103(a) as being unpatentable over FC-FS Draft Standard in view of Mulvey et al. (“Mulvey”, U.S. Patent No. 6,629,219). Applicants respectfully traverse these rejections.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations

must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). See also *In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970).

Further, “to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, *the prior art reference (or references when combined) must teach or suggest all the claim limitations.*” (emphasis added) (MPEP § 2143). *If an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious.* (emphasis added) *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

As indicated in the foregoing *Claim Rejections – 35 USC § 102* section, the primary reference, FC-FS Draft Standard fails to disclose, teach or suggest all the elements recited in Claims 1, 9, 16 and 17, specifically a two-channel controller having first and second channels connected through the enclosure elements in *reverse sequence as compared to each other*. Applicants respectfully submit that none of the ancillary references (Wall and Mulvey) cure the defects of FC-FS Draft Standard.

Wall is cited for the disclosure of use of a third channel in the system which the Patent office admitted that FC-FS Draft Standard does not explicitly disclose. Further, Mulvey is cited for the disclosure of a by-pass selector section which can by-pass disk drives. However, neither Wall nor Mulvey cure the defect of FC-FS Draft Standard in reference to Claims 1, 9 and 16 for they do not explicitly or implicitly teach or suggest specifically a two-channel controller having first and second channels connected through the enclosure elements *in reverse sequence as compared to each other* as recited in Claims 1, 9, 16 and 17.

Accordingly, Applicants respectfully request the removal of all the pending rejections under 35 U.S.C. §103 is respectfully requested and allowance is earnestly solicited.

CONCLUSION

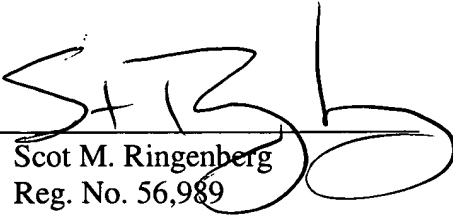
In light of the forgoing amendments and arguments, reconsideration of the claims is hereby requested, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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Dated: July 26, 2006

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